

# 1

## 2

3

4

6

# 1

4

16

17

19

20

1           conjugating said antibody or fragment thereof with a member selected from the  
2   group consisting of toxins, enzymes, radioactive compounds, and hematogenous cells; and  
3           administering conjugated antibodies or fragments thereof to said patient;  
4           wherein said conjugated antibodies are placed in admixture with a pharmaceutically  
5   acceptable adjuvant and are administered in an amount effective to mediate treatment of  
6   said cancerous disease.

7  
8           Claim 4.       The method of claim 3, wherein said antibody or fragment thereof is  
9   humanized.

10  
11          Claim 5. The method for treating a patient suffering from a cancerous disease in  
12   accordance with claim 1 wherein:  
13          the cytotoxicity of said antibody or fragment thereof is mediated through antibody  
14   dependent cellular toxicity.

15  
16          Claim 6. The method for treating a patient suffering from a cancerous disease in  
17   accordance with claim 1 wherein:  
18          the cytotoxicity of said antibody or fragment thereof is mediated through  
19   complement dependent cellular toxicity.

20  
21          Claim 7. The method for treating a patient suffering from a cancerous disease in  
22   accordance with claim 1 wherein:

1           the cytotoxicity of said antibody or fragment thereof is mediated through catalyzing  
2 of the hydrolysis of cellular chemical bonds.

3

4           Claim 8. The method for treating a patient suffering from a cancerous disease in  
5 accordance with claim 1 wherein:

6           the cytotoxicity of said antibody or fragment thereof is mediated through producing  
7 an immune response against putative cancer antigens residing on tumor cells.

8

9           Claim 9. The method for treating a patient suffering from a cancerous disease in  
10 accordance with claim 1 wherein:

11           the cytotoxicity of said antibody or fragment thereof is mediated through targeting  
12 of cell membrane proteins to interfere with their function.

13

14           Claim 10. The method for treating a patient suffering from a cancerous disease in  
15 accordance with claim 1 wherein:

16           the cytotoxicity of said antibody or fragment thereof is mediated through  
17 production of a conformational change in a cellular protein effective to produce a signal to  
18 initiate cell-killing.

19

20           Claim 11.     The method for treating a patient suffering from a cancerous disease  
21 in accordance with claim 1 wherein:

1           said method of production utilizes a tissue sample containing cancerous and non-  
2 cancerous cells obtained from a particular individual.

3

4           Claim 12.     A method for treating a patient suffering from a cancerous disease  
5 comprising:

6           administering to said patient an antibody or fragment thereof produced in  
7 accordance with a method for the production of anti-cancer antibodies which are useful in  
8 treating a cancerous disease, said antibody being cytotoxic against cells of a cancerous  
9 tissue, and essentially benign to non-cancerous cells;

10          wherein said antibody is the isolated monoclonal antibody or antigen binding  
11 fragment thereof encoded by the clone deposited with the ATCC as PTA-4621, and is  
12 placed in admixture with a pharmaceutically acceptable adjuvant and is administered in an  
13 amount effective to mediate treatment of said cancerous disease.

14

15          Claim 13.     The method for treating a patient suffering from a cancerous disease  
16 in accordance with claim 12, wherein said antibody or fragment thereof is humanized.

17

18          Claim 14.     The method for treating a patient suffering from a cancerous disease  
19 in accordance with claim 12 comprising:

20          conjugating said antibody or fragment thereof with a member selected from the  
21 group consisting of toxins, enzymes, radioactive compounds, and hematogenous cells; and

22          administering conjugated antibodies or fragments thereof to said patient;

1 wherein said conjugated antibodies are placed in admixture with a pharmaceutically  
2 acceptable adjuvant and are administered in an amount effective to mediate treatment of  
3 said cancerous disease.

4  
5 Claim 15. The method of claim 14, wherein said antibody or fragment thereof  
6 is selected from said subset are humanized.

7  
8 Claim 16. The method for treating a patient suffering from a cancerous disease in  
9 accordance with claim 12 wherein:

10 the cytotoxicity of said antibody or fragment thereof is mediated through antibody  
11 dependent cellular toxicity.

12  
13 Claim 17. The method for treating a patient suffering from a cancerous disease in  
14 accordance with claim 12 wherein:

15 the cytotoxicity of said antibody or fragment thereof is mediated through  
16 complement dependent cellular toxicity.

17  
18 Claim 18. The method for treating a patient suffering from a cancerous disease in  
19 accordance with claim 12 wherein:

20 the cytotoxicity of said antibody or fragment thereof is mediated through catalyzing  
21 of the hydrolysis of cellular chemical bonds.

1           Claim 19. The method for treating a patient suffering from a cancerous disease  
2   in accordance with claim 12 wherein:

3           the cytotoxicity of said antibody or fragment thereof is mediated through  
4   producing an immune response against putative cancer antigens residing on tumor  
5   cells.

6

7           Claim 20. The method for treating a patient suffering from a cancerous disease  
8   in accordance with claim 12 wherein:

9           the cytotoxicity of said antibody or fragment thereof is mediated through  
10   targeting of cell membrane proteins to interfere with their function.

11

12           Claim 21. The method for treating a patient suffering from a cancerous disease  
13   in accordance with claim 12 wherein:

14           the cytotoxicity of said antibody or fragment thereof is mediated through  
15   production of a conformational change in a cellular protein effective to produce a  
16   signal to initiate cell-killing.

17

18           Claim 22.     The method for treating a patient suffering from a cancerous  
19   disease in accordance with claim 12 wherein:

20           said method of production utilizes a tissue sample containing cancerous and  
21   non-cancerous cells obtained from a particular individual.

22

1           Claim 23.     A process for mediating cytotoxicity of a human tumor cell  
2     which expresses CD44 on the cell surface comprising contacting said tumor cell with  
3     an isolated monoclonal antibody or antigen binding fragments thereof encoded by the  
4     clone deposited with the ATCC as Accession Number PTA-4621, whereby cell  
5     cytotoxicity occurs as a result of said binding.

6

7           Claim 24.     The process of claim 23 wherein said isolated antibody or  
8     antigen binding fragments thereof are humanized.

9

10          Claim 25.     The process of claim 23 wherein said isolated antibody or  
11     antigen binding fragments thereof are conjugated with a member selected from the  
12     group consisting of but not limited to cytotoxic moieties, enzymes, radioactive  
13     compounds, and hematogenous cells.

14

15          Claim 26.     The process of claim 23 wherein said isolated antibody or  
16     antigen binding fragments thereof are chimerized.

17

18          Claim 27.     The process of claim 23 wherein said isolated antibody or  
19     antigen binding fragments thereof are murine.

20

1           Claim 28.     The process of claim 23 wherein the human tumor tissue sample  
2 is obtained from a tumor originating in a tissue selected from the group consisting of  
3 colon, ovarian, lung, and breast tissue.

4  
5           Claim 29.     A binding assay to determine a presence of cells which express  
6 a CD44 antigenic moiety which specifically binds to an isolated monoclonal antibody  
7 or antigen binding fragment thereof encoded by the clone deposited with the ATCC as  
8 PTA-4621 comprising:

9           providing a cell sample;

10          providing an isolated monoclonal antibody or antigen binding fragment thereof  
11 encoded by the clone deposited with the ATCC as PTA-4621;

12          contacting said isolated monoclonal antibody or antigen binding fragment  
13 thereof with said cell sample; and

14          determining binding of said isolated monoclonal antibody or antigen binding  
15 fragment thereof with said cell sample;

16          whereby the presence of cells which express a CD44 antigenic moiety which  
17 specifically binds to an isolated monoclonal antibody or antigen binding fragment  
18 thereof encoded by the clone deposited with the ATCC as PTA-4621 in said sample is  
19 determined.

20          Claim 30.     The binding assay of claim 29 wherein the cell sample is  
21 obtained from a tumor originating in a tissue selected from the group consisting of  
22 colon, ovarian, lung, and breast tissue.



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21

Claim 31. A process of isolating or screening for cells in a sample which express a CD44 antigenic moiety which specifically binds to an isolated monoclonal antibody or antigen binding fragment thereof encoded by the clone deposited with the ATCC as PTA-4621 comprising:

providing a cell sample;

providing an isolated monoclonal antibody or antigen binding fragment thereof encoded by the clone deposited with the ATCC as PTA-4621;

contacting said isolated monoclonal antibody or antigen binding fragment thereof with said cell sample; and

determining binding of said isolated monoclonal antibody or antigen binding fragment thereof with said cell sample;

whereby said cells which express a CD44 antigenic moiety which specifically binds to an isolated monoclonal antibody or antigen binding fragment thereof encoded by the clone deposited with the ATCC as PTA-4621 are isolated by said binding and their presence in said cell sample is confirmed.

Claim 32. The process of claim 31 wherein the cell sample is obtained from a tumor originating in a tissue selected from the group consisting of colon, ovarian, lung, and breast tissue.

1           Claim 33. A method of extending survival and delaying disease progression by  
2   treating a human tumor in a mammal, wherein said tumor expresses an antigen which  
3   specifically binds to a monoclonal antibody or antigen binding fragment thereof which  
4   has the identifying characteristics of a monoclonal antibody encoded by a clone  
5   deposited with the ATCC as accession number PTA-4621 comprising administering to  
6   said mammal said monoclonal antibody in an amount effective to reduce said  
7   mammal's tumor burden, whereby disease progression is delayed and survival is  
8   extended.

9  
10  
11           Claim 34. The method of claim 33 wherein said antibody is conjugated to a  
12   cytotoxic moiety.

13  
14           Claim 35. The method of claim 33 wherein said cytotoxic moiety is a  
15   radioactive isotope.

16  
17           Claim 36. The method of claim 33 wherein said antibody activates complement.

18  
19           Claim 37. The method of claim 33 wherein said antibody mediates antibody  
20   dependent cellular cytotoxicity.

21  
22           Claim 38. The method of claim 33 wherein said antibody is a murine antibody.

23

1           Claim 39. The method of claim 33 wherein said antibody is a humanized  
2 antibody

3

4           Claim 40. The method of claim 33 wherein said antibody is a chimerized  
5 antibody.

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23